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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,272	07/11/2001	Yasuhiro Mouri	110092	8345

25944 7590 10/17/2003

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EXAMINER

BEACHAM, CHRISTOPHER R

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 10/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/902,272

Applicant(s)

MOURI ET AL.

Examiner

Christopher R. Beacham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Jabbari (US 5,557,490).

- Regarding claim 1, Jabbari shows a pivot assembly 114 for a magnetic disk storage comprising:

- a fixed shaft 116;

- a pair of ball bearings 118, 120, mounted thereon to support an actuator block 104, wherein each inner ring 122 of the pair of ball bearings 118, 120, is fixed directly to the fixed shaft 116 (col. 2, lines 65-67) and the pair of ball bearings 118, 120, is fitted directly into an axial bore 110 of the actuator block 104 (col. 3, lines 16-34; Figure 4B).

- Regarding claim 2, Jabbari shows a pivot assembly 114 for a magnetic disk storage comprising:

- a fixed shaft 116;

- a pair of ball bearings 118, 120, mounted thereon to support an actuator block 104, wherein each inner ring 122 of the pair of ball bearings 118, 120, is fixed directly to the fixed shaft 116 (col. 2, lines 65-67), each of the pair of ball bearings 118, 120, is

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provided with an outer ring 124 having a thickness increased by the thickness of a sleeve 112 conventionally interposed between a pair of ball bearings 118, 120, and an actuator block 104, and the pair of ball bearings 118, 120, is fitted directly into an axial bore of the actuator block 104 (col. 3, lines 16-34; Figure 4B).

- Regarding claims 3 and 5, Jabbari shows a spacer 128 is interposed between said pair of ball bearings 118, 120 (Figure 3).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jabbari (US 5,557,490) as applied to claims 1 and 2 above, and further in view of Takahashi et al. (hereinafter Takahashi) (US 4,984,115).

- Regarding claims 4 and 6, Jabbari discloses all the features except each pair of ball bearings having an extension formed on one side of an outer ring thereof, and said pair of ball bearings being mounted onto said fixed shaft with said extensions abutted against each other.

Takahashi shows a pair of ball bearings 15c, 16c, having an extension formed on one side of an outer ring 15a' thereof, and said pair of ball bearings 15c, 16c are

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mounted onto said fixed shaft 7 with said extensions abutted against each other (Figure 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide pivot assembly of Jabbari with a pair of ball bearings having an extension formed on one side of an outer ring thereof, and said pair of ball bearings being mounted onto said fixed shaft with said extensions abutted against each other as taught by Takahashi.

The rationale is as follows: One of ordinary skill in the art at the time of the invention would have been motivated to provide the pivot assembly of Jabbari with a pair of ball bearings having an extension formed on one side of an outer ring thereof, and said pair of ball bearings being mounted onto said fixed shaft with said extensions abutted against each other as taught by Takahashi in order to dispose of the spacer between the outer rings of the bearing set (Takahashi; col. 6, lines 12-16) so that the radial rigidity of the bearing set can be increased.

### ***Response to Arguments***

Applicant's arguments filed 8/12/2003 have been fully considered but they are not persuasive:

- First, Applicant states on page 4:

*"Nowhere does Jabbari disclose or suggest fitting the bearing sets 118 directly into the pivot bore 110. Therefore, Jabbari does disclose or suggest that each inner ring of the pair of ball bearings is fixed directly to the fixed shaft and the pair of ball bearings is fitted directly into an axial bore of the actuator block, as recited in claims 1 and 2."*

The Examiner maintains Jabbari shows in Figure 4B "fitting the bearing sets 118 directly into the pivot bore 110" as claimed. Also, the Examiner agrees that "Jabbari does disclose or suggest that each inner ring of the pair of ball bearings is fixed directly to the fixed shaft and the pair of ball bearings is fitted directly into an axial bore of the actuator block, as recited in claims 1 and 2" (Applicant's Remarks, page 4).

Therefore, the rejection of claims 1 and 2, is maintained.

- Second, Applicant asserts on page 5:

*"Applicants respectfully submit that Jabbari and Takahashi, individually or in combination, do not disclose or suggest that each inner ring of a pair of ball bearings is fixed directly to a fixed shaft and the pair of ball bearings is fitted directly into an axial bore of the actuator block, as recited in claims 1 and 2."*

As noted previously, Jabbari shows the features of claims 1 and 2. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Jabbari discloses all the features except each pair of ball bearings having an extension formed on one side of an outer ring thereof, and said pair of ball bearings being mounted onto said fixed shaft with said extensions abutted against each other as claimed in claims 4 and 6.

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Takahashi shows a pair of ball bearings 15c, 16c, having an extension formed on one side of an outer ring 15a' thereof, and said pair of ball bearings 15c, 16c are mounted onto said fixed shaft 7 with said extensions abutted against each other (Figure 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide pivot assembly of Jabbari with a pair of ball bearings having an extension formed on one side of an outer ring thereof, and said pair of ball bearings being mounted onto said fixed shaft with said extensions abutted against each other as taught by Takahashi.

The rationale is as follows: One of ordinary skill in the art at the time of the invention would have been motivated to provide the pivot assembly of Jabbari with a pair of ball bearings having an extension formed on one side of an outer ring thereof, and said pair of ball bearings being mounted onto said fixed shaft with said extensions abutted against each other as taught by Takahashi in order to dispose of the spacer between the outer rings of the bearing set (Takahashi; col. 6, lines 12-16) so that the radial rigidity of the bearing set can be increased.

Therefore, the rejection of claims 4 and 6, is upheld.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

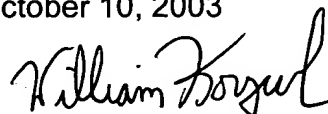
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Beacham whose telephone number is (703) 605-4256. The examiner can normally be reached on M-F, 8: 00 am-5: 30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.



Christopher R. Beacham  
Patent Examiner  
Art Unit 2653  
October 10, 2003



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